

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

WRITTEN OPINION  
(PCT Rule 66)

<b>To:</b> WITTOP KONING, T.H. Exter Polak & Charlois B.V. P.O. Box 3241 2280 GE RIJSWIJK PAYS-BAS		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">Termijn: 19.01.06</td> </tr> <tr> <td style="padding: 2px 5px;">Rec.: 21 OKT. 2005</td> </tr> <tr> <td style="padding: 2px 5px;">Opbergen:</td> </tr> </table>	Termijn: 19.01.06	Rec.: 21 OKT. 2005	Opbergen:
Termijn: 19.01.06					
Rec.: 21 OKT. 2005					
Opbergen:					
Date of mailing (day/month/year)		19.10.2005			
Applicant's or agent's file reference P27091PC00/RKI/EOF		<b>REPLY DUE</b> <b>within 3 month(s)</b> from the above date of mailing			
International application No. PCT/NL2003/000928	International filing date (day/month/year) 18.12.2003	Priority date (day/month/year) 18.12.2003			
International Patent Classification (IPC) or both national classification and IPC B01J37/00					
Applicant AVANTIUM INTERNATIONAL B.V. et al.					

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
 

I	<input checked="" type="checkbox"/>	Basis of the opinion
II	<input type="checkbox"/>	Priority
III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	<input type="checkbox"/>	Lack of unity of invention
V	<input checked="" type="checkbox"/>	Reasoned statement under Rule 66.2(a)(II) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI	<input type="checkbox"/>	Certain documents cited
VII	<input type="checkbox"/>	Certain defects in the international application
VIII	<input type="checkbox"/>	Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.
 

**When?**      See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?**      By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9

**Also:**      For an additional opportunity to submit amendments, see Rule 66.4.  
                  For the examiners obligation to consider amendments and/or arguments, see Rule 66.4 bis  
                  For an informal communication with the examiner, see Rule 66.6

**If no reply is filed**, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 18.04.2006

Name and mailing address of the international preliminary examining authority:  <div style="display: flex; align-items: center;"> <div>                         European Patent Office                          D-80298 Munich                          Tel. +49 89 2399 - 0 Tx: 523656 epmu d                          Fax: +49 89 2399 - 4465                     </div> </div>	Authorized Officer Holzwarth, A Formalities officer (incl. extension of time limits) Spira, C Telephone No +49 89 2399-7096
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**WRITTEN OPINION**

International application No. PCT/NL2003/000928

**I. Basis of the opinion**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

**Description, Pages**

1-9 as originally filed

**Claims, Numbers**

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

## WRITTEN OPINION

International application No. PCT/NL2003/000928

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Novelty (N)	Claims	6-10
Inventive step (IS)	Claims	1-5
Industrial applicability (IA)	Claims	1-10

### 2. Citations and explanations

**see separate sheet**

**WRITTEN OPINION  
 SEPARATE SHEET**

International application No. PCT/NL03/00928

**Re Item I**

**Basis of the opinion**

The examination is being carried out on the following application documents:

Text for the Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

**Description, pages:**

1-9 as originally filed

**Claims, No.:**

1-10 as originally filed

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: EP-A-0 895 809 (ASAHI CHEMICAL IND) 10 February 1999 (1999-02-10)
- D2: US 2002/115879 A1 (HINAGO HIDENORI ET AL) 22 August 2002 (2002-08-22)
- D3: EP-A-1 358 932 (ROHM & HAAS) 5 November 2003 (2003-11-05)

**1. The application does not meet the requirements of Article 6 PCT, because of the following reasons:**

The term "ceramic form" in claim 1 is unclear as from this term it is not possible to derive, that "powdery form" and not "colloidal form" is meant. The applicant should be aware of the fact that such unclear features cannot be used to separate the invention from the prior art.

**Therefore claim 1 is not clear.**

**2. The present application does not meet the criteria of Article 33(1) PCT, because of**

the following reasons:

**2.1 D1** (paragraphs [0001], [0093], [0098]-[0109]; example 1), **D2** (paragraphs [0002], [0170]-[0183], examples) disclose Mo-V-Te-Nb catalysts, which are prepared by preparation procedures according claim 1, but using colloidal silica as inert carrier material. As the example section does not provide any evidence that there is an advantage in using silica in a powdery form, no inventive step can be recognized. **Furthermore from claim 4 it is clear that the silica used in the present invention can have particle sizes in the range of the colloidal silica precursors used in D1 and D2.** The catalysts in D1 and D2 are used for the preparation of (meth)acrylic acid or (meth)acrylonitrile by catalytic oxidation or ammoxidation of propane or isobutane and a person skilled in the art knows that they are also suitable for the preparation of acetic acid from ethane (see also D3).

**D3** (examples 1,7; paragraphs [0001], [0036] - [0040]) discloses Mo-V-Te-Nb catalysts, which are prepared by physical mixing of the carrier materials with the calcined Mo-V-Te-Nb mixed oxide or by washcoating of the calcined Mo-V-Te-Nb mixed oxide onto a monolithic support. As the example section does not provide any evidence that there is an advantage in introducing the carrier material into the precursor slurry before calcination, no inventive step can be recognized. The catalysts of D3 are said to be suitable for the preparation of carboxylic acids and nitriles from alkanes.

**Therefore the subject-matter of at least claim 1 does not involve an inventive step in the sense of Article 33(3) PCT in view of D1-D3.**

**2.2** The Applicant's attention is drawn to the fact that claim 6 is a "product-by-process" claim. A new process does not automatically lead to a new product; consequently, should the applicant maintain any product-by-process claim he is requested to give evidence (eg. by means of comparative tests) that the product thus claimed is novel an inventive. At present it is not clear what the difference of a catalyst according to claim 6 is, compared to a catalyst according to the prior art as disclosed in D1-D3.

**Therefore the subject-matter of the claim 6 is not new in the sense of Article 33(2) PCT in view of D1-D3.**

**2.3** The uses mentioned in the claims 7-10 are already disclosed in D1-D3 or are known to a person skilled in the art (see under 2.1).

**Therefore the subject-matter of the claims 7-10 is not new in the sense of Article 33(2) PCT in view of D1-D3.**

**2.4** Dependent claims 2-5 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step, because said additional features are either disclosed in the prior art documents (see above) or are trivial or within the competence of a skilled person looking for alternative catalysts or processes.